CLAIMS

1. A method for estimating an emotion term from a set of input PAD values, comprising the steps of:

(a) providing a set of input PAD values;

(b) for each emotion in a PAD table of emotions, calculating a distance $Distance_i$ between said set of input PAD values and an i^{th} record in a PAD table according to the following formula:

$$Distance_i = \sqrt{|P - P_i|^2 + |D - D_i|^2 + |A - A_i|^2}$$

where P, A, D are the input PAD values, and P_i, A_i, D_i, are the P, A, D values for record i,

(c) selecting the smallest value for $Distance_i$; and

(d) converting the P_i, A_i, D_i, value corresponding to the smallest value for $Distance_i$ into an emotion term.

2. A method according to claim 1, wherein said method further includes the step of outputting an error factor, comprising the steps of:

(e) calculating $P_{error}=(P-P_i)$, $A_{error}=(A-A_i)$ and $D_{error}=(D-D_i)$ for the smallest value of $Distance_i$; and

(f) outputting P_{error}, A_{error} and D_{error}.

3. A system for estimating an emotion term from a set of input PAD values comprising:

an input for receiving a set of input PAD values;

a PAD table of emotions, containing a plurality of records;

a calculator for calculating a distance between said set of input PAD values and an i^{th} record of said table;

a selector for selecting the record corresponding to the smallest distance between the input PAD values and the PAD values for the selected record;

a converter for converting the PAD values for the selected record into an emotion; and

an output for outputting said emotion.

4. A system according to claim 3, wherein said system further includes an error calculator for calculating an error factor between said input PAD values and the PAD values for the selected record.

5. A method for estimating a distance between a set of PAD values and an emotion term, comprising the steps of:

(a) providing a set of input PAD values;

(b) calculating a distance between said input PAD values and said emotion term;

(c) transforming said distance as a percentage;

(d) outputting said distance and said percentage.

6. A system for estimating a distance between a set of PAD values and an emotion term, comprising:

an input for receiving said PAD values;

a calculator for calculating a distance between said input PAD values and said emotion term;

a transformer for transforming said distance into a percentage; and

an output for outputting said percentage.

7. A method for converting a set of *n* input PAD values into a group emotion, comprising the steps of:

(a) inputting the input PAD values;

(b) calculating P_{avg}, A_{avg} and D_{avg};

(c) converting P_{avg}, A_{avg} and D_{avg} into an emotion.

8. A method according to claim 7, wherein in said step (b), calculating P_{avg}, A_{avg} and D_{avg} includes calculating P_{median}, A_{median} and D_{median}.

9. A system for converting a set of *n* input PAD values into a group emotion, comprising:

an input for receiving the input PAD values;

a calculator for calculating P_{avg}, A_{avg} and D_{avg}; and

a converter for converting P_{avg}, A_{avg} and D_{avg} into an emotion.

10. A system according to claim 9, wherein said calculator also calculates P_{median}, A_{median} and D_{median}.

11. A method for converting a set of *n* input PAD and AVC values into an emotion, term for the purpose of data conversion and using AVC statistics to infer "mood", comprising the steps of:

(a) inputting input PAD values

(b) Converting AVC values into PAD values by first mapping them to PAD and then scaling each to the range from -100 to 100, mapping

A in AVC to A in PAD;

V in AVC to P in PAD;

C in AVC to D in PAD;

(c) calculating P_{avg}, A_{avg} and D_{avg};

(d) converting P_{avg}, A_{avg} and D_{avg} into an emotion term

12. A closed loop system adapted to achieve a desired state, the difference between the actual state of the system and said desired state being represented as an input P value, the input A value being the rate of change of the system and the input D value being how rapidly the system is achieving the desired state, wherein said system includes an output, said output being an emotion converted from the input P, A, D values.

13. A system according to claim 12, wherein said system is a heating/cooling system, where P is the difference between the set temperature and the actual temperature, A is whether or not the system is on, and D is how rapidly the system is achieving the set temperature.

14. A global terrain warning system for an airplane, said system comprising inputs for monitoring height above ground level and converting the same to a P value, rate of change of altitude and converting the same to an A value and degree of corrective action and converting the same to a D value; a converter for converting the P, A and D values into an emotion; and a speech synthesizer adapted to reproduce speech based on said emotion.

15. A system for the simulation of human emotion in adventure game characters, simulated characters in a military simulation, or simulated-human agents by relating character goal achievement to P; speed of motion and/or urgency to A; ability to dominate a situation to D, along with a subsystem for weighting emotion tendencies, in order to simulate various emotion behaviour abnormalities, and to control character behaviour and appearance, when controlled by the resultant emotion term.

16. An open loop system for monitoring a state of said system, a difference between a set condition and a present condition being represented by a P value, a variability in said condition being represented as an A value, and a rate at which said present condition attains said set condition being represented as a D value, wherein said system further includes an output, said output being an emotion converted from the input P,A,D values.